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A NON-THERMAL PLASMA REACTOR HAVING INDIVIDUALLY RETAINED POSITIVE AND NEGATIVE REACTOR PLATES

ABSTRACT OF THE DISCLOSURE

A non-thermal plasma reactor and method provides individually retained reactor plates. The method comprises stacking an alternating sequence of positive and negative reactor plates to form a reactor stack, placing temporary spacers between the positive and negative reactor plates. In one embodiment, individually retained reactor plates are secured by folds of a ceramic insulating layer extending between plate pairs, with reactor plates secured by the stack retention material and the folds of the ceramic insulating layer. In a second embodiment, individually retained reactor plates are secured with a permanent pleated insulating mica separator disposed on each side of the reactor. In a third embodiment, a retention material extends slightly into the exhaust gas passages at each side of the stack supplying permanent support for the stacked plates.